

inner tube 3 made from generally metallic materials. A filler material including a bound aggregate material is provided between the outer tube 2 and the inner tube 3.

Satake discloses a steel pipe 1 having a primer applied to its surface. A corrosion preventive material 3 is then applied and a composite material 4 consisting of a corrosion preventing material and reinforcing material are in turn applied thereon. Applicant respectfully disagrees with the Office Action assertion that the material for aggregate filler would have been a matter of choice. Further, the Office Action states that it would have been obvious to one of ordinary skill in the art to modify *Quigley* (presumably *Satake* is intended), to include the bound aggregate material in order to protect any steel or metal bars from the effects of corrosion. Thus, the Office Action appears to recognize that *Satake* does not disclose a filler material comprising a bound aggregate material as in Applicant's independent claims 1 and 9.

The Office Action indicates that the corrosion preventive material 3 of *Satake* corresponds to the filler material of independent claims 1 and 9. As stated in *Satake* an object of the invention is to provide a corrosion preventive coated metal pipe by using a rapid hardening and drying cure type corrosion preventive material, thereby accelerating a hardening speed, shortening the time from coating until handling of a dried pipe,... ." See *Satake* at col. 1, the paragraph beginning at line 34. Further, as stated at col. 2 in the paragraph beginning at line 36, the rapid hardening property of the material is quite advantageous in the coating operation, resulting in reduction in handling time. Thus, based upon the teachings of *Satake*, a person skilled in the art would not contemplate the use of a bound aggregate material as the corrosive

preventive material 3 because bound aggregate materials do not have the property to rapidly dry and harden as required by *Satake*.

Satake also discloses at the paragraph beginning at line 31 of col. 4, that the corrosion preventive material should be applied at a given thickness directly onto the surface of a metal pipe according to a spraying method. However, the use of bound aggregate material does not lend itself to being applied to the surface of a steel pipe using a spray method. As discussed at *Satake* at the paragraph beginning at line 17 of col. 1, bound aggregate materials, such as asphalt and bituminous materials are unsuitable for use in *Satake* as a corrosion protection layer. Thus, the ordinarily skilled artisan would not have been motivated to use an aggregate material as the corrosive preventive material 3 in *Satake*.

Further, the corrosion preventive coated metal pipe of *Satake* is assembled as discussed in the paragraph beginning at line 45 of col. 4. First a primer is applied to the surface of a steel pipe and then corrosion preventive material 3 and finally a composite material 4 are applied to the corrosion preventive material. *Satake* clearly does not disclose providing the corrosion preventive material 3 after the composite material is applied. Thus, claim 9 is distinguishable over *Satake*.

Mirmiran et al. does not overcome the deficiencies of *Satake* noted above. *Mirmiran et al.* discloses an exterior filament wound shell 12 including an interior protruded portion 14 consisting of combinations of fiber and resin. The exterior filament shell 12 provides a form for a concrete core 18.

The Office Action asserts that there are no real or positively recited method steps in claim 9. This assertion is respectfully traversed.

Claim 9 clearly recites providing a pre-formed fiber reinforced polymer outer tube, providing an inner tube made from generally metallic materials and inserting a bound aggregate as a filler material between the outer tube and the inner tube.

The dependent claims are allowable for at least the reasons discussed above as well as for the individual features they recite. Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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